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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/800,743	03/08/2001	John McCormack	EDGE001/01US	5719

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HANSEN HUANG TECHNOLOGY LAW GROUP, LLP
1725 EYE STREET, NW
SUITE 300
WASHINGTON, DC 20006

EXAMINER	
MATTIS, JASON E	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/800,743	MCCORMACK ET AL.	
	Examiner	Art Unit	
	Jason E. Mattis	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1 paper*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the Supplemental Amendment filed 10/4/07. Claims 1-25 have been cancelled. New claims 28-34 have been added. Claims 26-34 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu (U.S. Pat. 6665301 B1) in view of Yemini et al. (U.S. Publication US 2002/0163889 A1).

With respect to claim 26, Wu discloses a method for providing a quality of service-based packet switched network to effect Internet telephony and other forms of communication **(See column 3 lines 26-40, column 5 line 47 to column 6 line 7, and Figures 1 and 3 of Wu for reference to providing a quality of serviced-based packet switched network 10 to effect voice-over IP transmission and other forms of communication)**. Wu also discloses

providing an ingress and an egress multi-protocol convergence switch from enabling an endpoint to connect to any other endpoint within the network through the Internet **(See column 3 line 57 to column 4 line 9 and Figure 1 of Wu for reference to system 10 including a private boundary node 30 (Node A), which is an ingress MPCS, and private boundary node 38 (Node D), which is an egress MPCS, enabling an endpoint to connect to any endpoint within the system 10 through the Internet)**. Wu further discloses an ingress virtual circuit from an originating endpoint to the ingress MPCS, a virtual private network between two or more MPCSs, and an egress virtual circuit from the egress MPCS to a destination endpoint with the VCs being comprised of any protocol **(See column 4 lines 10-39 and Figure 1 of Wu for reference to a first virtual circuit 56 that connects an endpoint to Node A, for reference to a virtual private network between Nodes A, Node B, Intermediate Node, Node C, and Node D, and for reference to a second virtual circuit 56 that connects Node D to a destination endpoint with the VCs 56 inherently using a protocol)**. Wu et al. also discloses the ingress and egress MPCSs each straddling an edge network an a core network with the core network comprising the VPN that carries traffic from one edge network to another edge network and with the edge networks comprising the VCs **(See column 3 line 57 to column 4 line 39 and Figure 1 of Wu for reference to Nodes A and D each straddling a private network, which is an edge network comprising VCs, and a public network, which is a core network comprising the VPN)**. Wu also discloses the ingress and egress MPCSs configured so the VPN comprises one or more virtual trunks

with each VT connecting the ingress and egress MPCSs **(See column 4 lines 10-39 and Figure 1 of Wu for reference to the VPN comprising virtual tunnels 50, which are virtual trunks, connecting Nodes A and B with each virtual tunnel inherently using a protocol)**. Wu further discloses that the VTs differ from each other in quantity of reserved bandwidth **(See column 6 lines 8-19, column 6 lines 50-67 and Figure 3 of Wu for reference to various virtual tunnels 116 having different transmission rates, and thus bandwidth limitations, reserved)**. Wu also discloses that the ingress and egress MPCSs are each configured so the VPN exists independently of the VCs in time **(See column 4 lines 10-39 and Figure 1 of Wu for reference to the VPN and it's virtual tunnels 50 existing independent of the virtual circuits 56 such that the existence of the virtual tunnels 50 does not affect the existence of the virtual circuits 56)**. Wu further discloses connecting originating and destination endpoints by sending a telephone call to a telephone's associated MPCS via a VC **(See column 11 lines 9-17 and Figure 7 of Wu for reference to a Node A receiving call data via a VC from an endpoint)**. Wu also discloses the ingress MPCS determining on which VT the call should be routed based on required bandwidth **(See column 6 lines 37-49 of Wu for reference to the Node A determining which virtual tunnel to use based on the current bandwidth limitations of the virtual tunnels such that the transmission rates allocated to the tunnels are not exceeded)**. Wu further discloses sending the call through the VPN via a selected VT to a destination egress MPCS **(See column 11 lines 31-45 and Figure 7 of Wu for reference to transmitting scheduled**

traffic in a selected VT to a termination Node). Wu also discloses sending the call from the egress MPCS to a destination telephone through a VC associated with the destination telephone **(See column 11 lines 31-45 of Wu for reference to separating the call data from the virtual tunnel and sending it from Node D to a destination via a VC connected to the destination)**. Wu also discloses recognizing communications quality and delivery requirements for class of services and choosing a form of transport based on class of service comprising the ATM protocol **(See column 3 line 57 to column 4 line 9, column 5 line 47 to column 6 line 7, and column 11 lines 31-45 of Wu for reference to recognizing quality of service requirements and choosing an ATM transport from based on the QoS requirements)**. Wu does not specifically disclose the switches supporting each of MPLS, TCP, UDP, and ATM.

With respect to claim 28, Wu discloses a method for providing a quality of service-based packet switched network to effect Internet telephony and other forms of communication **(See column 3 lines 26-40, column 5 line 47 to column 6 line 7, and Figures 1 and 3 of Wu for reference to providing a quality of serviced-based packet switched network 10 to effect voice-over IP transmission and other forms of communication)**. Wu also discloses routing an outgoing call by connecting originating and destination endpoints by sending a telephone call to a telephone's associated MPCS via a VC **(See column 11 lines 9-17 and Figure 7 of Wu for reference to a Node A receiving call data via a VC from an endpoint)**. Wu further discloses an ingress virtual circuit from an originating endpoint to the ingress MPCS, a virtual private network

between two or more MPCSs, and an egress virtual circuit from the egress MPCS to a destination endpoint with the VCs being comprised of any protocol **(See column 4 lines 10-39 and Figure 1 of Wu for reference to a first virtual circuit 56 that connects an endpoint to Node A, for reference to a virtual private network between Nodes A, Node B, Intermediate Node, Node C, and Node D, and for reference to a second virtual circuit 56 that connects Node D to a destination endpoint with the VCs 56 inherently using a protocol)**. Wu also discloses that the ingress and egress MPCSs are each configured so the VPN exists independently of the VCs in time **(See column 4 lines 10-39 and Figure 1 of Wu for reference to the VPN and it's virtual tunnels 50 existing independent of the virtual circuits 56 such that the existence of the virtual tunnels 50 does not affect the existence of the virtual circuits 56)**. Wu also discloses the ingress MPCS determining on which VT the call should be routed based on required bandwidth **(See column 6 lines 37-49 of Wu for reference to the Node A determining which virtual tunnel to use based on the current bandwidth limitations of the virtual tunnels such that the transmission rates allocated to the tunnels are not exceeded)**. Wu further discloses sending the call through the VPN via a selected VT to a destination egress MPCS **(See column 11 lines 31-45 and Figure 7 of Wu for reference to transmitting scheduled traffic in a selected VT to a termination Node)**. Wu also discloses sending the call from the egress MPCS to a destination telephone through a VC associated with the destination telephone **(See column 11 lines 31-45 of Wu for reference to separating the call data from the virtual tunnel**

and sending it from Node D to a destination via a VC connected to the destination). Wu does not specifically disclose the switches supporting each of MPLS, TCP, UDP, and ATM.

With respect to claims 26 and 28, Yemini et al., in the field of communications, discloses switches supporting conversion between each of MPLS, TCP, UDP, and ATM **(See page 4 paragraphs 39-40 of Yemini et al. for reference to multiple protocol switches converting data between any of MPLS, TCP, UDP, and ATM)**. Using switches supporting conversion between each of MPLS, TCP, UDP, and ATM has the advantage of allowing a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yemini et al., to combine using switches supporting conversion between each of MPLS, TCP, UDP, and ATM, as suggested by Yemini et al., with the system and method of Wu, with the motivation being to allow a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

4. Claims 27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Yemini et al. and Yang (U.S. Application 10/706730).

With respect to claims 27 and 29, Wu discloses converting data from the edge network VC protocol to the core network VT protocol and vice versa if

necessary **(See column 11 liens 9-45 of Wu for reference to converting between VC and virtual tunnel protocol formats)**. Wu also discloses enabling provisioning of the core network of VTs set up in advance and independent of any edge network VCs **(See column 4 lines 10-39 and Figure 1 of Wu for reference to the virtual tunnels 50 of the VPN being set up independently from the virtual circuits 56 of the edge networks such that they are enabled to be managed independently without affecting each other)**. Wu does not disclose converting data from IP to MPLS and vice versa. Wu further does not disclose performing interstripping on IP traffic.

With respect to claims 27 and 29, Yemini et al., in the field of communications, discloses switches supporting conversion between each of MPLS, IP, TCP, UDP, and ATM **(See page 4 paragraphs 39-40 of Yemini et al. for reference to multiple protocol switches converting data between any of MPLS, TCP, UDP, and ATM)**. Using switches supporting conversion between each of MPLS, TCP, UDP, and ATM has the advantage of allowing a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yemini et al., to combine using switches supporting conversion between each of MPLS, TCP, UDP, and ATM, as suggested by Yemini et al., with the system and method of Wu, with the motivation being to allow a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

With respect to claims 27 and 29, Yang, in the field of communications, discloses a network that strips off RTP/UDP/IP headers from packets before transferring them over an ATM network **(See page 4 paragraph 90 to page 5 paragraph 103 and Figure 4B of Yang for reference to forming compressing a packet by completely removing IP/UDP/RTP headers before sending a packet over an ATM network and routing the packet to an ATM egress switch)**. Yang also discloses adding IP/UDP/RTP headers back onto a packet after a packet has been received at an egress of an ATM network and before sending the packet to an IP network **(See page 5 paragraphs 107-108 and Figure 4B of Yang for reference to decompressing a packet by adding an IP/UDP/RTP header on the packet after it is received at an edge switch to an IP network)**. Stripping a header before sending it over an ATM network and adding it back on at an egress switch of an ATM network has the advantage of providing a higher compression gain while saving resources, as suggested by Yang **(See page 2 paragraph 49 of Yang for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yang, to stripping a header before sending it over an ATM network and adding it back on at an egress switch, as suggested by Yang, with the Internet telephony method of Wu and Yemini et al., with the motivation being to provide a higher compression gain while saving resources.

5. Claims 30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Yemini et al., Kuehnel (U.S. Publication US 2004/0202148 A1), and Yang.

With respect to claims 30-34, Wu discloses converting data from the edge network VC protocol to the core network VT protocol and vice versa if necessary **(See column 11 liens 9-45 of Wu for reference to converting between VC and virtual tunnel protocol formats)**. Wu also discloses enabling provisioning of the core network of VTs set up in advance and independent of any edge network VCs **(See column 4 lines 10-39 and Figure 1 of Wu for reference to the virtual tunnels 50 of the VPN being set up independently from the virtual circuits 56 of the edge networks such that they are enabled to be managed independently without affecting each other)**. Wu does not disclose converting data from IP to AAL2, AAL5, to AAL2, AAL5 to MPLS, AAL2 to MPLS, one AAL2 channel to another AAL2 channel, and vice versa. Wu further does not disclose performing interstripping on IP traffic.

With respect to claims 30-34, Yemini et al., in the field of communications, discloses switches supporting conversion between each of MPLS, IP, TCP, UDP, and ATM **(See page 4 paragraphs 39-40 of Yemini et al. for reference to multiple protocol switches converting data between any of MPLS, TCP, UDP, and ATM)**. Using switches supporting conversion between each of MPLS, TCP, UDP, and ATM has the advantage of allowing a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yemini et al., to combine using switches supporting conversion between each of MPLS, TCP, UDP, and ATM, as suggested by Yemini et al., with the system and method of Wu, with the motivation being to allow a switch to be connected to many different network types supporting any of MPLS, TCP, UDP, and ATM.

With respect to claims 30-34, Kuehnel, in the field of communications, discloses converting between AAL2, AAL5, MPLS, and other protocols **(See page 5 paragraph 51 of Kuehnel for reference to converting between AAL2, AAL5, MPLS, and other protocols)**. Converting between AAL2, AAL5, MPLS, and other protocols has the advantage of allowing a switch to be connected to many different network types supporting any of AAL2, AAL5, and MPLS.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Kuehnel, to combine converting between AAL2, AAL5, MPLS, and other protocols, as suggested by Kuehnel, with the system and method of Wu and Yemini et al., with the motivation being to allow a switch to be connected to many different network types supporting any of AAL2, AAL5, and MPLS.

With respect to claims 30-34, Yang, in the field of communications, discloses a network that strips off RTP/UDP/IP headers from packets before transferring them over an ATM network **(See page 4 paragraph 90 to page 5 paragraph 103 and Figure 4B of Yang for reference to forming compressing a packet by completely removing IP/UDP/RTP headers before sending a**

packet over an ATM network and routing the packet to an ATM egress switch). Yang also discloses adding IP/UDP/RTP headers back onto a packet after a packet has been received at an egress of an ATM network and before sending the packet to an IP network **(See page 5 paragraphs 107-108 and Figure 4B of Yang for reference to decompressing a packet by adding an IP/UDP/RTP header on the packet after it is received at an edge switch to an IP network)**. Stripping a header before sending it over an ATM network and adding it back on at an egress switch of an ATM network has the advantage of providing a higher compression gain while saving resources, as suggested by Yang **(See page 2 paragraph 49 of Yang for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Yang, to stripping a header before sending it over an ATM network and adding it back on at an egress switch, as suggested by Yang, with the Internet telephony method of Wu, Yemini et al. and Kuehnel, with the motivation being to provide a higher compression gain while saving resources.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jem

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600